

Appl. No. 10/687,947
Amdt. Dated December 9, 2005
Reply to Office Action of August 10, 2005

Attorney Docket No. 81863.0022
Customer No.: 26021

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 4(a) and 4(b). This sheet, which includes only Figs. 4(a) and 4(b), replaces the original sheet. In Figure 4(a) and 4(b), a legend --Prior Art-- has been added.

Attachment: Replacement Sheet - Figs. 4 (a) and 4 (b)
Annotated Sheet Showing Changes - Figs. 4 (a) and 4 (b)

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REMARKS/ARGUMENTS

Minor changes are made to this specification. Claims 4-8 and 10 are canceled without prejudice. Claims 11-20 are amended. Claims 1-3, 9 and 11-20 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Objections to the Drawings

Figures 4(a) and 4(b) stand objected to because the office contends that Figs. 4(a) and 4(b) should be designated with a legend such as --Prior Art--. In response, Applicant has added the legend --Prior Art-- to Fig. 4(a) and Fig. (4(b). Withdrawal of the objection is respectfully requested.

Objections to the Specification

Page 14 of the specification stands objected to because the specification describes a "non-constraint part 8a" (line 1), a "constraint part 8b" (line 2), and a "non-constraint part 8b" (lines 6-7), and a part, it is contended, cannot "be constrained and non-constrained simultaneously." Applicant notes that the confusion arises because of typographical errors in the reference numerals associated with the elements on page 14. Page 14 has been amended to reference --non-constraint part 8b-- at line 1, and -- constraint part 8a--. Support for this change is found in Fig. 3(a), and in Applicant's specification at p. 19, line 24-p.20, line 3. Withdrawal of the objection is respectfully requested.

The Specification further stands objected to because the elastic compliance stated in the Specification on p. 17, lines 4-7 is inconsistent with the unit of measure for the elastic compliance stated in claim 18. In response, applicant has amended claim 18 to correct a typographical error and recite the proper units for

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elastic compliance, m^2/N , which is also found in the specification, at e.g. p. 17, lines 4-7. Withdrawal of the objection is respectfully requested.

Objections to the Claims

Claim 18 is objected to for the following informality: the unit of measure elastic compliance stated in claim 18 is inconsistent with the unit of measure of elastic compliance in the Specification on p. 17, lines 4-7. In response, applicant has amended claim 18 to correct a typographical error and recite the proper units for elastic compliance, m^2/N , which is also found in the specification, at e.g. p. 17, lines 4-7. Withdrawal of the objection is respectfully requested.

Allowable Subject Matter

Claim 19 is objected to as being depended upon a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim. In response, Applicant has rewritten claim 19 in independent form including all the limitations of the base claim and any intervening claim. As such, withdrawal of the rejection and allowance of amended claim 19 is respectfully requested.

Further, Claims 11-18 and 20 have been amended to depend from claim 19, either directly or through intervening claims. As such, claims 11-18 and 20 are patentable for at least the same reasons as claim 19. Withdrawal of the rejection and allowance of claim 11-18 and 20 is respectfully requested.

Rejoinder of Species I, Claim 1-3 and 9

Claim 19 links elected Species II to non-elected Species I of the prior restriction requirement. Species I was defined by the Office as "Species I, claims 1-

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3, and 9, drawn to the maximum difference in composition ratio Pb/(Ti+Zr) between the surface of said piezoelectric ceramic layer and the inside of said substrate." Rejoinder of Species I and II pursuant to MPEP 809.04 is respectfully requested.

In the Office Action, at p. 9, the Office stated that "the prior art fails to disclose an actuator wherein "the maximum difference in composition ratio Pb/(Ti+Zr) between the surface of said piezoelectric ceramic layer and the inside of said substrate is 0.02 or less." Claims 1-3 and 9 contain this requirement and are patentable for at least the same reasons as claims 11-20. Rejoinder and allowance of claim 1-3 and 8 is respectfully requested.

Claim Rejections - 35 U.S.C. § 102, 103

Claims 10, 11, 15 and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kanno et al. (U.S. Patent No. 6,900,579 B2). Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanno et al. (U.S. Patent No. 6,900,579 B2) in view of Hasegawa et al (U.S. Patent No. 5,719,607). Claims 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanno et al. (U.S. Patent No. 6,900,579 B2) in view of Shimada et al (U.S. Patent No. 6,097,133). Claims 16 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanno et al. (U.S. Patent No. 6,900,579 B2) in view of Qui et al (U.S. Patent No. 6,142,615). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanno et al. (U.S. Patent No. 6,900,579 B2) in view of Hasegawa et al (U.S. Patent No. 6,842,166)

The rejection of claim 1 is rendered moot because claim 1 has been canceled without prejudice. Further, the rejections of claims 11-18 and 20 have been rendered moot because claim 11-18 and 20 have been amended to depend, either directly or through intervening claims from allowable independent claim 19. The

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Office does not contend that the cited references, either alone or in combination, anticipate or render obvious amended claim 19. As such, claims 11-18 and 20 are allowable over the cited art for at least the same reasons as amended claim 19. Withdrawal of the rejection and allowance of claims 11-18 and 20 is respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

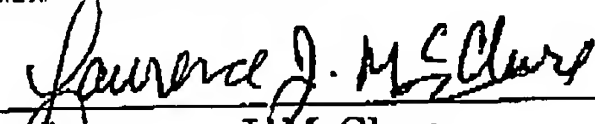
If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: December 9, 2005

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Annotated Sheet

FIG. 4(a) **PRIOR ART**

ADDED

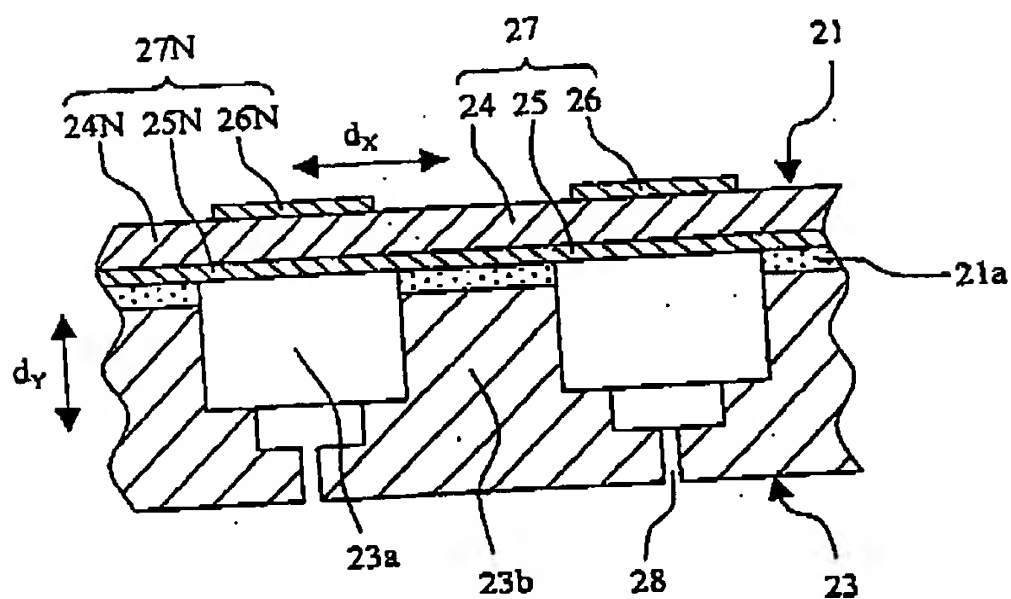


FIG. 4(b)

PRIOR ART

ADDED

